

An aerial photograph showing a winding river or canal cutting through a landscape of green agricultural fields. The river has several sharp turns, and the surrounding land is divided into rectangular plots. The water is a deep blue, contrasting with the vibrant green of the crops.

Quarterly Update of Activities

Michael Patrick George,
Delta Watermaster

May 23, 2019



DELTA STEWARDSHIP COUNCIL

Overview

- **Announcements:**
 - Succession at the SWRCB
 - Update on Water Quality Control Plan
- **First, the Good News:** progress on major initiatives
 - Improving data on senior water rights
 - Annual reports: moving from compliance to QC
 - Challenges to measuring diversions; developing a possible alternative
 - Coordinating efforts with the Council
- **Then, the Bad News**
 - Spotlight on deterioration of the southern Delta

Recent Appointments to the State Water Resources Control Board

- In February 2019, Governor Newsom appointed:
 - E. Joaquin Esquivel as Chair; and
 - Laurel Firestone as a new Board member



Update on Water Quality Control Plan

- March 1 – Board received more refined voluntary settlement outline from the proponents
- State agencies are coordinating refinement, evaluation and response
- Efforts could align voluntary agreements with the Water Board's Water Quality Control Plan program of implementation
- Overall objective: Accelerate and safeguard ecosystem improvements and protect beneficial uses

The Good News: Progress on Several Fronts

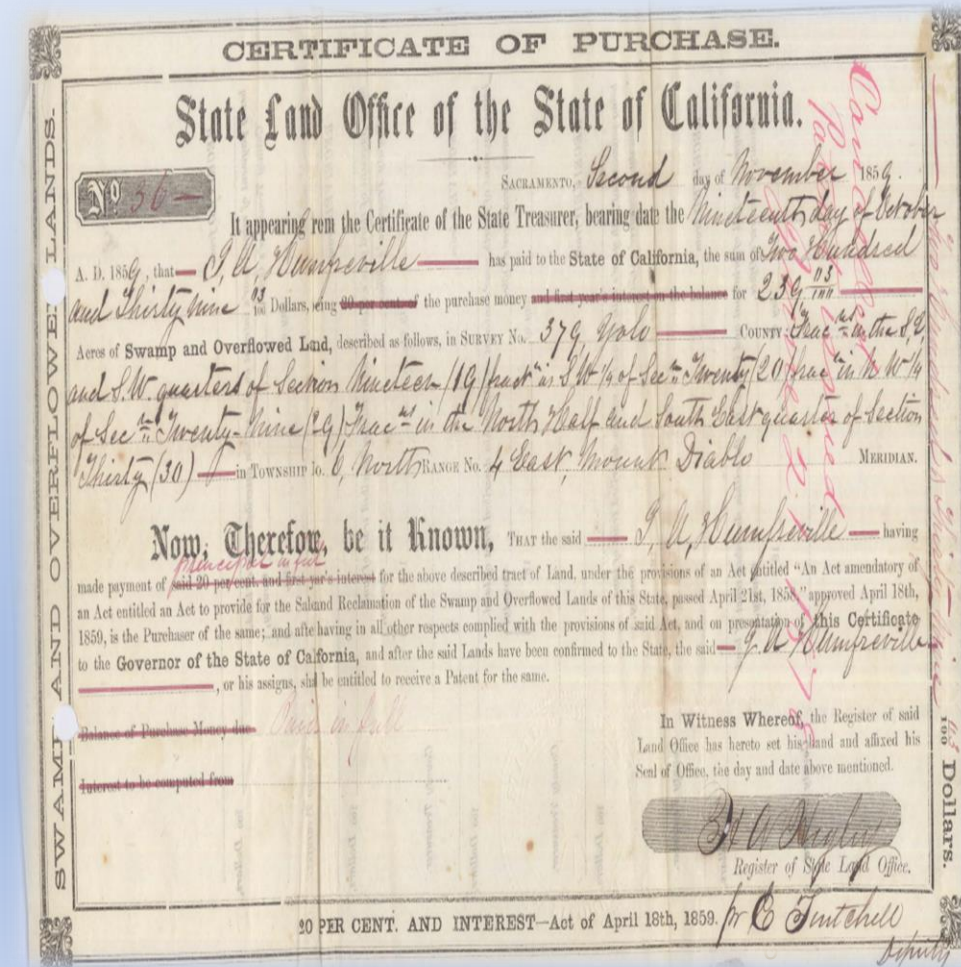
- Improving water rights data
- Enhancing annual water use reporting
- Grappling with challenges of measuring diversions
- Developing a superior alternative for measuring ET of crops
- Coordinating with Council initiatives

Refining the Taxonomy of Senior Water Rights

- Senior Claims were “grandfathered” in 1913

- Taxonomy from responses to 2015 Information Order

- Supports on-going “crowd correction”
- Opens the “black box” of Delta claims
- Allows for corrections of common misconceptions
- Improves understanding of demands and priorities
- Facilitates planning for next drought



Annual Reports: Compliance with Filing Requirements

Annual Reports of Diversion and Use within the Delta

	Calendar Year 2016		Calendar Year 2017		Calendar Year 2018	
	Licenses (due April 1, 2017)	Senior Claims (due July 1, 2017)	Licenses (due April 1, 2018)	Senior Claims (due July 1, 2018)	Licenses (due April 1, 2019)	Senior Claims (due July 1, 2019)
Total Number	327	2636	327	2653	327	
Delinquent at Deadline	83	323	69	319	49	
Delinquent at Deadline	25%	12%	21%	12%	15%	
Compliance at Deadline	75%	88%	79%	88%	85%	
Date of Full Compliance	Nov. 29, 2017	Nov. 29, 2017	June 20, 2018	Dec. 12, 2018	May 20, 2019	

Moving Focus to QA/QC

- Reviewing late submissions first (added incentive to file on time)
- Spotting consistent sources of error and confusion
- Publishing guidance
- Responding to requests for assistance and complaints
- Conducting field visits
- Conferring with intermediaries
- Refining our forms and cross-referencing data sources



Diversion Measurement

Challenges identified through the
Delta Measurement Experimentation Consortium:



- **Siphons** are inherently hard to measure—and there are lots of them
- Equipment **breaks down** incessantly
- Service and maintenance are **inconsistent**
- Reports will **arrive too late** to support action
- Inconsistency will **compromise** reliability

Consortium Participants



DELTA STEWARDSHIP COUNCIL



Metropolitan Water District
of Southern California



Agenda Item 4
Meeting Date: May 23, 2019

Possible Alternative:

Substitute remote sensing of crop water use

- **Open ET**: bringing science to the smart phone
- Focus on **water use** in the Delta
- Close to **real time** insight
- **Consistent** methodology
- **Lower cost** and intrusion
- **Refinement** through machine learning



Coordination with Council Initiatives

- Delta science funding/governance implementation initiative
- Climate change vulnerability assessment and adaption strategy

Objective: Support “One Delta, Once Science”



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Now, the Bad News: The Southern Delta is Facing Serious Deterioration

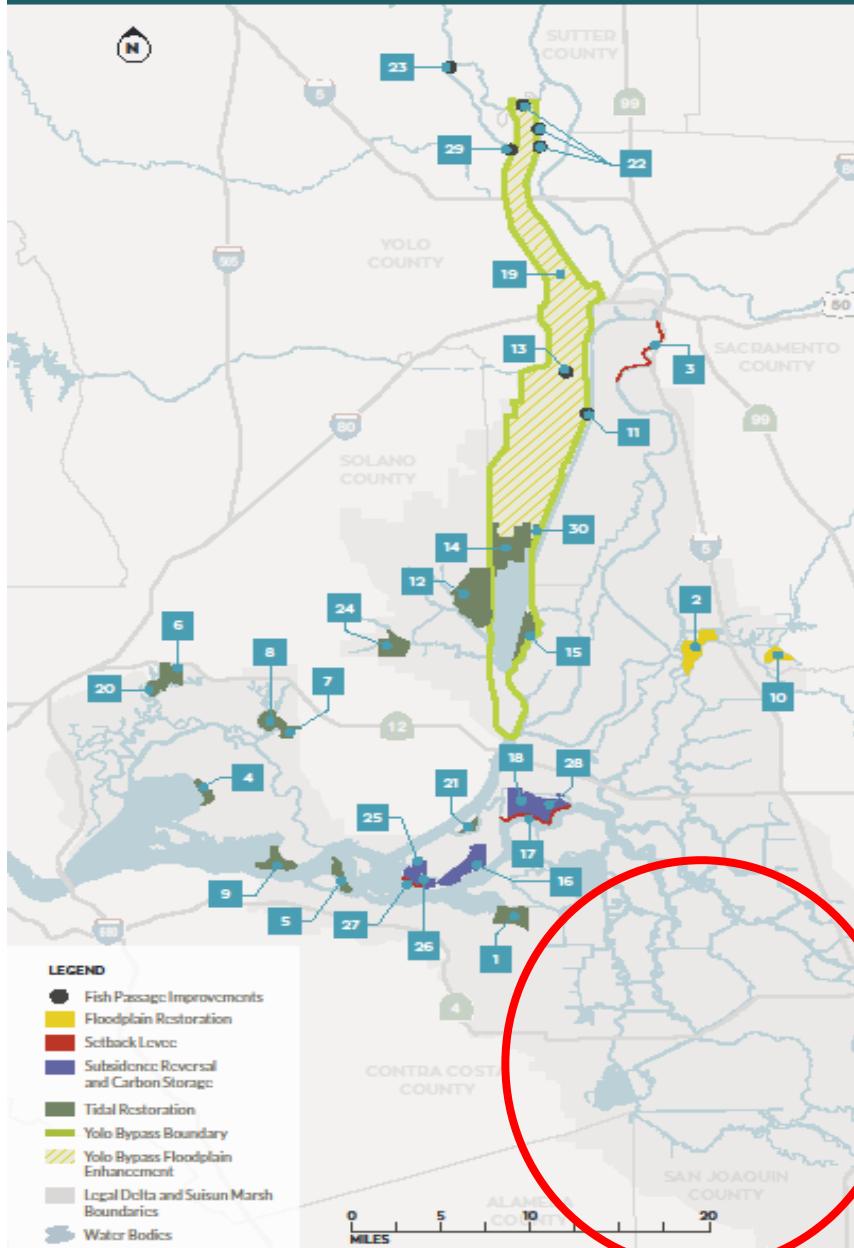
- Makes attaining co-equal goals more difficult
- Reduces ecosystem services
- Impedes fish migration
- Restricts capital formation and investment
- Increases conflict

Loss of Aquatic and Terrestrial Habitat without a Reconciliation Strategy

- No plan
- No budget
- No vision for fixing it



CALIFORNIA ECO RESTORE PROJECTS



CURRENTLY UNDER CONSTRUCTION

1	Dutch Slough
2	McCormack-Williamson Tract
3	Southport Levee Improvement
4	Tule Red

CONSTRUCTION PLANNED FOR 2019

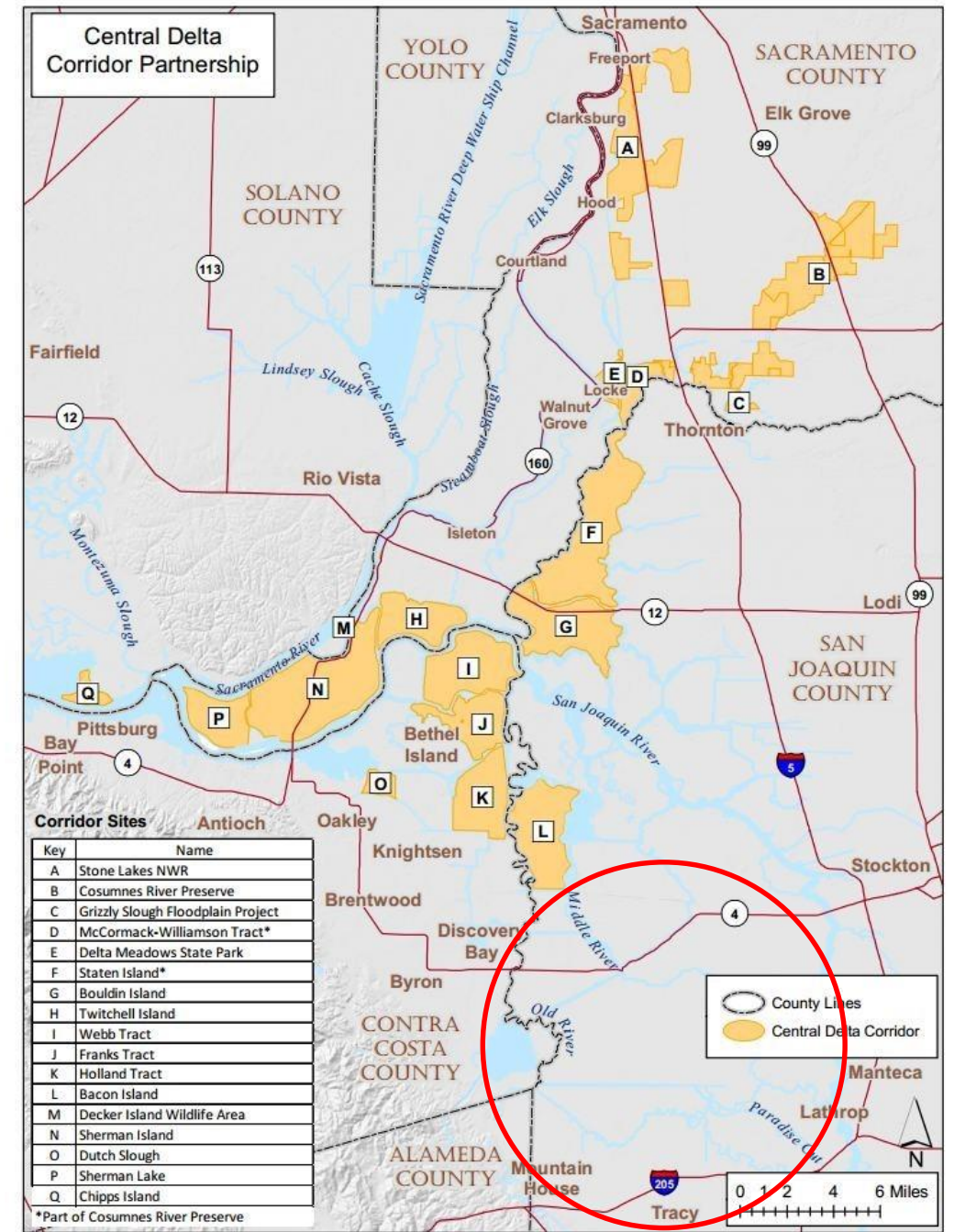
5	Winter Island
6	Hill Slough

CONSTRUCTION PLANNED FOR 2020+

7	Arnold Slough
8	Bradmoor Island
9	Chippis Island
10	Grizzly Slough
11	Lisbon Weir
12	Lookout Slough
13	Lower Putah Creek Realignment
14	Lower Yolo Ranch
15	Prospect Island
16	Sherman Island: Whale's Belly Wetland
17	Twitchell Island: Levee
18	Twitchell Island: West End
19	Yolo Bypass Floodplain Restoration
20	Wings Landing

COMPLETED CONSTRUCTION

21	Decker Island
22	Fremont Weir Adult Fish Passage Modification
23	Knights Landing Outfall Gate
24	Lindsey Slough
25	Sherman Island: Mayberry Farms
26	Sherman Island: Whale's Mouth
27	Sherman Island: Mayberry Slough
28	Twitchell Island: East End
29	Wallace Weir Fish Rescue Facility
30	Yolo Flyway Farms



Sediment Build-up is Choking Southern Delta Channels

Undesirable Impacts	Increased	Reduced	Expanded	Impeded	Compromised	Promote “Hot spot” build-up
Water temperature	X					
Toxic algae blooms	X					
Concentration of constituents of concern	X					
Net flow in the channels		X				
Dissolved oxygen		X				
Invasive species			X			
Navigation				X		
Flood response and levee maintenance					X	
Salinity						X

Ad Hoc Committee Response

- Interested (affected) parties developing a siltation problem statement
- Representatives of SWRCB, DWR, USBR, SLDMWA, SDWA among others
- We'll solicit a larger group to study the problem and suggest possible solutions
- Obstacles to solution include permitting, expense, uncertainties about how to balance impacts



Salinity Hot Spots

- Impact agricultural beneficial uses along Old and Middle Rivers
- Generate conflict among users and between users and regulators
- Relaxing the standards failed to resolve the problem
- An ad hoc process to synthesize decades of studies
 - Convened by the Office of the Delta Watermaster
 - Oversight from Delta operators and regulators
 - Lead Scientist will convene a panel to objectively synthesize specified materials
 - Attempting to move from finger pointing to collaborative remediation

The southern Delta remains the “killing fields” for out-migrating salmon

“Overall, the **Vernalis Adaptive Management Plan** study found that salmon smolt survival through the San Joaquin Delta can be as low as **two percent**, survival has consistently been **less than 12 percent**, and predation appears to have a far greater impact on salmon smolt survival than flow.”

~ FISHBIO





Farmers continue their economically driven migration to permanent crops (nuts and grapes)

Delta Tour

Wednesday, June 26

The Office of the Delta Watermaster is proposing a **full-day tour** of the Delta for the SWRCB and DSC Board members.

- Pick-up and drop-off in Sacramento
- By van and boat
- Limit:
 - Two SWRC Board members
 - Three DSC Board members

Agenda Item 4

Meeting Date: May 23, 2019



Thank you
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Photo Credit: Bay Nature, FishBio, Alamy, Department of Water Resources, The Nature Conservancy

